

ABSTRACT

SELF-CALIBRATION OF A PLL
WITH MULTIPHASE CLOCKS

A Phase-Locked Loop with multiphase clocks is provided. The Phase-Locked Loop includes a main loop, a calibration loop, and a Multiplexer. The main loop includes, coupled in series, a Phase Frequency Detector, a Main Charge Pump, a Main Loop Filter, a Multi-Phase Voltage Controlled Oscillator and a Phase-switching Fractional Divider. The calibration loop includes Y Calibration Loop Filters, with Y being an integer, coupled to the Multi-Phase Voltage Controlled Oscillator, and Control Logic for controlling the Phase-Switching Fractional Divider. The Multiplexer is coupled between an output of the Main Charge Pump and inputs of the Main Loop Filter and the Y Calibration Loop Filters. A Reference Frequency Signal is coupled to the Phase Frequency Detector, a control signal from the Control Logic is coupled to the Multiplexer, and a Calibration Signal is coupled to a control input of the Control Logic.

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